

2C show sections of a high temperature steel plate substrate 100 and a nickel aluminide anchor layer 110 electric-arc sprayed thereon, at magnifications of 500x, 1.51kx and 2.98kx, respectively. As is evident from these Figures, the anchor layer 110 provides a highly irregular surface on the substrate 100. Accordingly, the anchor layer 110 effectively increases the surface area on which catalytic material may be deposited on the carrier relative to a non-sprayed substrate and it provides structural features such as crevices, nooks, etc., that help prevent spalling of catalytic material from the anchor layer. Figures 2A through 2C illustrate that the relatively low temperature of the electric-arc spray process deposits the metal feedstock for the anchor layer on the substrate at a temperature that permits the feedstock to freeze when it impinges upon the substrate rather than remaining molten and flowing into a smoother configuration.--

REMARKS

I. Objection To The Disclosure

The Examiner has maintained the objection to the disclosure with respect to the amended first full paragraph appearing on page 16. The objection is to the reference to the photomicrographs of renumbered Figures 2A-2C showing the roughened surface existing after an anchor layer has been electric-arc sprayed thereon. The Examiner states:

"...on page 16, the first full paragraph has been amended to state that '[B]y comparison, photomicrographs of a foamed metal substrate taken at corresponding magnification...onto a substrate as taught herein.'

However, since the original Figures 2A-2D, which are supposed to be the above mentioned photomicrographs, were not included, it is unclear how the above statement can be verified.

Appropriate correction is required."

It is again¹ respectfully pointed out that original Figures 2E, 2F and 2G, now renumbered per the 9/27/00 amendment as Figures 2A, 2B and 2C, show, at greater magnification levels,² the same type of roughened surface attained by electric-arc spraying as did the omitted Figures 2A-2D. The statement at page 16 thus applies to renumbered Figures 2A, 2B and 2C. Specifically, as described in the amended paragraph on page 16, renumbered Figures 2A, 2B and 2C show an electric-arc-sprayed nickel aluminide anchor layer 110 at the

¹ See page 4 of Applicant's May 21, 2001 reply to the office action mailed December 18, 2000.